

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for manufacturing a semiconductor device, ~~including a heat treatment step of pulsed light irradiation,~~ comprising the steps of:

forming a semiconductor layer over a glass substrate;

forming an insulating layer over the semiconductor layer;

forming separately an island-like light-absorbing layers that are layer over the semiconductor layer with the insulating layer interposed therebetween, said island-like light-absorbing layer being capable of absorbing [[the]] a pulsed light over a glass substrate;

~~forming a semiconductor layer and an insulating layer overlapping with the semiconductor layer between the glass substrate and the light-absorbing layers; and~~

~~performing [[the]] a heat treatment for the semiconductor layer and the insulating layer by selectively heating the light-absorbing layers layer through an irradiation of the pulsed light irradiation.~~

2. (Currently Amended) A method for manufacturing a semiconductor device, ~~including a heat treatment step of pulsed light irradiation,~~ comprising the steps of:

forming a semiconductor layer over a glass substrate;

forming an insulating film over the semiconductor layer;

forming separately an island-like light-absorbing layer over the semiconductor layer with the insulating film interposed therebetween wherein a layers whose transmission factor of [[the]] a pulsed light by the island-like light-absorbing layer is 70 percent or less over a glass substrate whose and a transmission factor of the pulsed light by the glass substrate is 70 percent or more; and

~~forming a semiconductor layer and an insulating layer overlapping with the semiconductor layer between the glass substrate and the light-absorbing layers; and~~
performing ~~[[the]]~~ a heat treatment for the semiconductor layer and the insulating layer by selectively heating the light-absorbing ~~layers~~ layer through the irradiation of the pulsed light irradiation.

3. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a glass substrate;

forming an insulating layer over the semiconductor layer;

forming an island-like light-absorbing layer ~~layers~~ formed over a glass substrate having an insulating surface such that over the semiconductor layer with the insulating layer interposed therebetween wherein a length of one side of the light-absorbing layer is equal to or less than a thickness of the glass substrate; and

~~forming a semiconductor layer and an insulating layer overlapping with the semiconductor layer between the glass substrate and the light-absorbing layers; and~~

performing a heat treatment for the semiconductor layer and the insulating layer by selectively heating the light-absorbing ~~layers~~ layer through the irradiation of the pulsed light irradiation.

4. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a semiconductor layer over a glass substrate;

forming an insulating layer over the semiconductor layer;

forming and ~~patterning~~ patterning an island-like light-absorbing ~~layers~~ layer over the semiconductor layer with the insulating layer interposed therebetween, wherein ~~whose~~ a transmission factor of pulsed light by the island-like light-absorbing layer is 70 percent or less ~~such that a length of one side of the light-absorbing layer is equal to or~~

~~less than a thickness of a glass substrate, over the glass substrate whose and a~~
~~transmission factor of the pulsed light by the glass substrate that is emitted from a~~
~~pulsed light source is 70 percent or more; and~~

~~forming a semiconductor layer and an insulating layer overlapping with the~~
~~semiconductor layer between the glass substrate and the light absorbing layers; and~~

~~performing a heat treatment for the semiconductor layer and the insulating layer~~
~~by selectively heating the light-absorbing layers layer through the irradiation of the~~
~~pulsed light irradiation.~~

5. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming an island-like ~~divided~~ semiconductor layers layer over a glass substrate having an insulating surface;

forming a light-absorbing layer that overlaps with a whole surface of ~~each of the~~ semiconductor layers layer through an insulating layer and whose end portions are arranged outside of ~~each of the~~ semiconductor layers layer; and

performing a heat treatment for ~~each of the~~ semiconductor layers layer and the insulating layer by selectively heating the light-absorbing layer through pulsed light irradiation.

6. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming a first insulating layer over a glass substrate having an insulating surface;

forming an island-like ~~divided~~ semiconductor layers layer over the first insulating layer;

forming a second insulating layer covering a top face and a side face of ~~each of the~~ semiconductor layers layer;

forming a light-absorbing layer over the second insulating layer, the light-absorbing layer that covers the top face and the side face of ~~each of the semiconductor layers~~ layer and whose end portions are arranged outside of ~~each of the semiconductor layers~~ layer;

performing a heat treatment for ~~each of the semiconductor layers~~ layer and the insulating layer by selectively heating the light-absorbing layer through pulsed light irradiation; and

forming a gate electrode overlapping with ~~each of the semiconductor layers~~ layer by forming a metal layer over the light-absorbing layer and then performing an etching step.

7. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming an island-like divided semiconductor ~~layers~~ layer over a glass substrate;

forming a light-absorbing layer that overlaps with a whole surface of ~~each of the semiconductor layers~~ layer through an insulating layer and whose end portions are arranged outside of ~~each of the semiconductor layers~~ layer; and

performing a heat treatment for ~~each of the semiconductor layers~~ layer and the insulating layer by selectively heating the light-absorbing layer through a plurality of times of pulsed light irradiation.

8. (Currently Amended) A method for manufacturing a semiconductor device comprising the steps of:

forming an island-like divided semiconductor ~~layers~~ layer over a glass substrate whose transmission factor of pulsed light ~~that is~~ emitted from a pulsed light source is 70 percent or more;

forming a light-absorbing layer that overlaps with a whole surface of ~~each of the semiconductor layers~~ layer through an insulating layer, whose end portions are

arranged outside of ~~each of the semiconductor layers~~ layer, and whose transmission factor of the pulsed light is 70 percent or less; and

performing a heat treatment for ~~each of the semiconductor layers~~ layer and the insulating layer by selectively heating the light-absorbing layer through a plurality of times of the pulsed light irradiation.

9. (Original) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein the light-absorbing layer is formed from a metal nitride.

10. (Original) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein the pulsed light is coherent light.

11. (Original) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein the pulsed light is coherent light that has a pulse width of from 10 to 100 nanoseconds.

12. (Currently Amended) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein the pulsed light is non-coherent light ~~that has a pulse width of~~ that has a pulse width of from 1 to 100 microseconds.

13. (Original) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein a light source of the pulsed light is a pulsed laser oscillator.

14. (Original) A method for manufacturing a semiconductor device according to any one of Claims 1 to 8, wherein a light source of the pulsed light is a xenon flash lamp.

15. (Original) A heat treatment method comprising the steps of:

forming and patterning a light-absorbing layer over a glass substrate having an insulating surface such that a length of one side of the light-absorbing layer is equal to or less than a thickness of the glass substrate;

providing an object to be heated that is arranged inside of the light-absorbing layer, between the glass substrate and the light-absorbing layer; and

performing a heat treatment for the object to be heated by selectively heating the light-absorbing layer through pulsed light irradiation.

16. (Original) A heat treatment method comprising the steps of:

forming and patterning a light-absorbing layer whose transmission factor of pulsed light is 70 percent or less such that a length of one side of the light-absorbing layer is equal to or less than a thickness of a glass substrate over the glass substrate whose transmission factor of the pulsed light that is emitted from a pulsed light source is 70 percent or more;

providing an object to be heated that is arranged inside of the light-absorbing layer between the glass substrate and the light-absorbing layer; and

performing a heat treatment for the object to be heated by selectively heating a region where the light-absorbing layer is formed, through the pulsed light irradiation.

17. (Original) A heat treatment method according to Claim 15 or 16, wherein the light-absorbing layer is formed from a metal nitride.

18. (Original) A heat treatment method according to Claim 15 or 16, wherein the pulsed light is coherent light.

19. (Original) A heat treatment method according to Claim 15 or 16, wherein the pulsed light is coherent light that has a pulse width of from 10 to 100 nanoseconds.

20. (Currently Amended) A heat treatment method according to ~~Claims~~ Claim 15 or 16, wherein the pulsed light is non-coherent light ~~[[with]]~~ that has a pulse width of from 1 to 100 microseconds.

21. (Original) A heat treatment method according to Claim 15 or 16, wherein a light source of the pulsed light is a pulsed laser oscillator.

22. (Original) A heat treatment method according to Claim 15 or 16, wherein a light source of the pulsed light is a xenon flash lamp.